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EXAMINER

024492 GM12/0209  
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 15

Application Number: 09/040,798  
Filing Date: March 18, 1998  
Appellant(s): Keller et al.

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Richard Klein  
For Appellant

**MAILED**  
**FEB 09 2001**  
**GROUP 3700**

**EXAMINER'S ANSWER**

This is in response to appellant's brief on appeal filed October 18, 2000.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

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A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is correct.

**(7) *Grouping of Claims***

Appellant's brief includes a statement that claims 1-44 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

**(8) *Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) *Prior Art of Record***

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

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4,762,322	Molitor et al.	08-1988
5,779,562	Melvin et al.	07-1998
5,813,322	Cavallaro et al.	09-1998

**(10) *Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melvin et al. (562) or Cavallaro et al. (923), each in view of Molitor et al. (322). The latter reference renders it obvious to mold the polyurethane layers of the primary reference golf balls by a reaction injection molding process, since such is an obvious expedient for providing the desired resiliency in a golf ball, as illustrated by the secondary reference. Any other possible distinctions over said thus modified golf balls are deemed conventional molding techniques that would necessarily be used in such molding process.

**(11) *Response to Argument***

Regarding the argument that one of ordinary skill would not be led from the golf ball art to utilize a method which is known in golf club heads, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the

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art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, all references are directed to sports articles which utilize polyurethane outer covers. The sports articles are subjected to severe impacting wherein a high strength to weight ratio would be a desirable quality for both articles. It would have been obvious to one of ordinary skill in the art to utilize reaction injection molding instead of injection molding to form the outer polyurethane layer of either Cavallaro et al. or Melvin et al. in order to provide a golf ball with a cover having a high strength to weight ratio.

The appellant also argues that the one of ordinary skill would not be motivated to look to advancements in molding methods of golf clubs for molding methods for golf balls. However, because golf balls and golf clubs commonly undergo similar stresses one of ordinary skill would be led to the golf club art for particular advancements therein which would solve the problems encountered in the golf ball art.

Attention is directed to column 14, lines 36-47 of Cavallaro et al., column 18, lines 59-63 of Melvin et al. and column 3, lines 12-32 of Molitor et al. The passages of Cavallaro et al. and Melvin et al. state that the outer layer may be injection or compression molded. The passage of Molitor et al. states that the use of RIM polyurethane at the club face provides better resiliency matching with the ball. Thus, it would have been obvious to one of ordinary skill in the art to utilize reaction injection molding instead of injection molding to form the outer polyurethane layer of either Cavallaro et al. or Melvin et al. in order to better match the resiliency of the golf ball cover with a club face having a reaction injection molded polyurethane face.

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In response to appellant's argument that the references fail to teach how one skill in the art may combine the different technologies, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In response to appellant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the appellant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Regarding the statement that Molitor does not disclose the instantly claimed reaction injection molding process for golf balls, the rejection is over the combination of Melvin et al. or Cavallaro et al., each in view of Molitor et al. Melvin et al. and Cavallaro et al. teach golf ball constructions having polyurethane outer covers, however, they lack the teaching for forming the covers by a reaction injection molding process. It would have been obvious to one of ordinary skill in the art to form the outer polyurethane covers of Melvin et al. and Cavallaro et al. by reaction injection molding method in order to take advantage of the known benefits of the

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method. Note column 3, lines 12-23 of Molitor et al. which detail these advantages (i.e. low density, high strength to weight ratio).

Further, attention is directed to column 5, lines 18-21 of Molitor et al. which specifically states that reaction injection molding is a well known technique. The appellant is requested to note that the specific characteristics of the method and the product obtained therefrom have been considered to be obvious given the statement by Molitor et al. that RIM is a well known method and lacking a showing of the characteristics criticality by a new and unexpected result.

Regarding instant claims 1-13, the particular details for the recited method have been determined to be obvious lacking a showing of their criticality by a new and unexpected result. See *In re Aller et al.* 105 USPQ 233. The appellant has noted that the references lack the particular flex modulus and reaction time of the instant claims, however, he has failed to provide any test results or arguments in affidavit form which would disprove that these numbers are merely workable ranges obtained by routine experimentation. Thus, it would have been obvious to one of ordinary skill in the art to form the golf ball of Melvin et al. or Cavallaro et al. utilizing the reaction injection molding method detailed by Molitor et al. and according to the instantly claimed numbers as the appellant has not shown that these particular numbers solve any stated purpose and it appears that the combination of Melvin et al. or Cavallaro et al. each in view of Molitor et al. would accomplish similar purposes.

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Regarding instant claims 14-37, as set forth above, the combination of Melvin et al. or Cavallaro et al. each in view of Molitor et al. would provide a golf ball comprising a reaction injection molded material comprising polyurethane/polyurea.

Regarding claims 38-41, as set forth above, the combination of Melvin et al. or Cavallaro et al. each in view of Molitor et al. would provide a golf ball comprising a reaction injection molded material comprising polyurethane/polyurea. Further, the step defining recycling at least 20% of the polyurethane/polyurea has been determined to be obvious lacking a showing of the criticality for the recited amount.

Regarding claims 42-44, as set forth above, the combination of Melvin et al. or Cavallaro et al. each in view of Molitor et al. would provide a golf ball comprising a reaction injection molded material comprising polyurethane/polyurea. Also, as the appellant has failed to provide any test results or arguments in affidavit form which would disprove that these numbers are merely workable ranges obtained by routine experimentation, it would have been obvious to one of ordinary skill in the art to form the golf ball of Melvin et al. or Cavallaro et al. utilizing the reaction injection molding method detailed by Molitor et al. and according to the instantly claimed numbers.



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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

  
Steven Wong  
Primary Examiner

SBW  
February 8, 2001

Mark Graham (conferee); Dolores Collins (conferee)





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